JULY
VOL.4

1973
No.5

BULL-ETIN

SAN ANTONIO RADIO CLUB

President - Ivan Mangold WA5RNV
Vice President - Bill Ross K5LLK
Secretary - Mike Fritz WN5HLX
Treasurer - Frank Box WA5VFM
Sgt-at-Arms - Brenda & Linda Trappe

Meets first and third Fridays at 7:30 p.m. at the Red Cross Building, 90 Brees St. All who have an INTEREST in amateur radio are cordially invited to attend.

Bull-etin Editor, Dean Davis W5BGE Typist, Maybelle Davis, XYL

*** *** *** *** *** *** *** *** *** *** ***

The PREZ SEZ

By IVAN WA5RNV

Well, Field Day has passed, what a ball?? Rain, ticks, red bugs (chiggers) and mosquitos. Talk about mosquitos; had to have two blood transfusions, knocked one off my arm, stepped backward and stumbled over two more. 'Course, the characters with air conditioned mobile homes to operate from looked great after the ordeal. Did you know that thru the generosity of George W5OI, Aubrey K5MOF and yours truly suffered through broiled sirloin, baked potatoes, lettuce & tomatoe salad with Roqueford dressing for dinner Saturday nite. Oh, yes, and peach cobbler for dessert.

I want to thank Roland W5LLS for the loan of a 7.5 KW generator, (without it several stations would have had to shut down about nine o'clock Saturday evening, as the Club's generator went sour,) all participants and visitors, and especially Bill K5TSR, Field Day Chairman, who spent many hours in planning and making the weekend a real success.

Be sure and mark your calendar to attend our meeting on 3 August 1973. Morris Guzick W5IO, Manager of the Fifth District QSL Bureau will be our guest speaker, to tell us the HOW's and WHY's of the Bureau. We might prevail on Morris for a question-answer period.

Hurricane Season is upon us. Do you have your equipment in first class working order? We may need to call on you for help. (At the present writing Alice is active in the Gulf. Watch her!) THAS ALL!!

73, Ivan WA5RNV.

-...- -...-

TEXAS TRAFFIC NET FISH FRY

The Texas Traffic Net has chosen the dates of 29 and 30 Sept. for its annual get-together at the west side of Lake Whitney. Dave's Resort at Morgan City is the site. A fish fry Saturday night will be a highlight of the meeting. All interested amateurs are invited. Motel reservations may be made by writing Dave's Resort, Rt. 1, Box 28, Morgan City, 76671 (Telephone 817 775-2245.) Talk-in frequencies: 3961, 7290 and 146.94,146.88.

-...- -...-

TEXAS CW NET PICNIC

The Texas CW Net Picnic will be held Saturday, July 21 at City Park, Georgetown. W5QU is in charge of arrangements. Bring your own food! For further info contact Jerry W5ABQ. Talk-in frequencies: 3915, 7260 and 146.34/94.

-...- -...-

FCC BULLETIN FROM ARRL

The Federal Communications Commission June 28 issued a notice extending to August 30 the former compliance date of June 30 for full application of the new repeater rules in Docket 18803.
This is less than the 120 days requested by ARRL, but at least provides an interim period where hopefully FCC can catch up on its backlog of repeater license applications, and amateurs who have not yet filed (or were rejected), will not be forced to shut down.

TECHNICAL TOPICS

By W5LFM Cal Graf

At a recent meeting of the San Antonio Radio Club during the "Electronic Show and Tell" period, a very interesting demonstration was put on by one of our members. WB5CIT, Corky Sarvis, gave a working demonstration of his hand-held Touch Tone Pad Auto Patch. With a Touch Tone pad and 2 meter transceiver about the size of a six pak, Corky placed a radio-telephone call to a waiting friend from right inside the building while talking to the SARC gathering. And it worked, too! This feat is really amazing when you get down to it. But we are so conditioned to Dick Tracy and his wrist TV, that we see an actual working demonstration of a device from the future, we tend to not think of it as truly unusual. Inventor Bell had no idea what would be happening with his telephone of the future. Corky combined his knowledge of amateur radio and Bell Tel and now provides a real public service with his ready access to the local police or safety dispatcher. Next comes mobile picture phone for the amateur!

Right on the heels of what the advanced amateurs of San Antonio are doing is that of the Motorola Communications Division. As shown on the front cover of July 73 Popular Science, Motorola describes their hand-held radio-telephone called Dynatac, which looks somewhat like the WW II version of the handi-talkie radio. The system makes use of a number of relay transmitters, receivers, and a central processor computer at the phone exchange. UHF TV channels 70 through 83 will be used, which have recently been allocated by the FCC for this purpose.

The first Dynatec system will be installed in New York City by 1976. Costs will be comparable to that of a car telephone service. The central computer will switch in different relay TXs and RXs for the best signal to noise ratio as the hand-held unit moves through the streets and buildings.

Also described at a recent show-and-tell was the "Testone" as shown by the writer. The circuit is fairly simple but the Testone is a very useful test and checkout instrument. The heart of the device is a Mallory Sonalert which is a low current, solid-state electronic tone buzzer which puts out a frequency of 2900 hertz. The Testone is a "contoneuity tester" and is used to measure continuity from zero ohms to about 50k ohms, the amplitude of the tone becoming weaker with increased resistance. A momentary, push buttom switch is used for battery and instrument circuit check. The unit draws less than 2 milliamperes at zero ohms to less than 200 microamperes at 50k ohms. The unit works rather well with low voltage devices such as transistors, ICs, and printed circuits.

The Testone measures continuity of linear (non-directional) devices such as carbon resistors, light bulbs, motor fields and armatures, transformer, voice coils, fuses, etc., sounding out with a tone when the device is connected in any direction. It also tests non-linear devices such as diodes (silicon, selinium, LEDs), transistors, photo cells, etc. A good diode will conduct in one direction (with a loud sound) but not in the reverse direction (high resistance, low or no sound). A shorted diode will conduct in both directions, and an open diode in neither direction. A good capacitor will produce a short "ping" sound, while a shorted one will produce a loud steady tone.

The Testone gives indication of circuit or component continuity by sound rather than by sight. Therefore, it is not necessary to glance toward a meter in order to observe movement. It can be used for trouble-shooting electronic circuits, wiring and components, automobile wiring and electrical devices such as horns, relays, solenoids, batteries, or household wiring such as wires, fuses, blower motors, and energized circuits. For additional information on the Testone, contact Technigraf Company at 344-5032 after 5 P.M. Regards for now.
(For circuit schematic of the Testone see Page 3.) Cal Graf W5LFM.

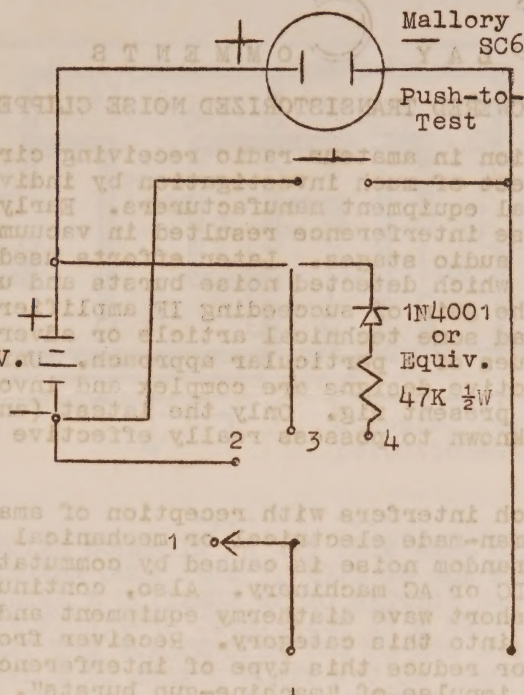
-...- -...-

Flash! Friday 3 Aug.

SARC ANNOUNCES THAT
MORRIS GUZICK W5IO
5th DIST. QSL BUREAU MGR.
WILL BE FEATURED SPEAKER
AT THE AUG. 3 MEETING.

Plan to attend

TESTONE CIRCUIT DIAGRAM
FOR CONTONEUITY TESTS AND AC/DC VOLTAGE MEASUREMENTS



SWITCH POSITION	FUNCTION
1.	Off - Battery off, no input
2.	Continuity - tone
3.	DC Voltage test 1-28 VDC - tone
4.	AC Voltage test 115-230 VAC - warble

Note: Use Push-to-test only on Pos. 2.

de Calvin R. Graf W5LFM.

-...- -...-

SARO TIRS PROJECT

San Antonio Repeater organization, Sunday July 1, was working on another step toward completion of their segment of TIRS (Texas Intercity Relay System). They could be heard on 2M FM from Blanco on top of a water tower working out a path into Austin via Blanco. A 450 link is being considered at this site. At the Blanco location were Alan WA5JEC, Jerry K5AXN, Dan W5YOY, Morris W5IZN, Alan W5UPO and Larry W5QMU. Assisting from Austin were WA5ESR and W5YZD. Helping locally were Wally W5BTW, Loren W5WEU and Dink WA5LNL. Elaborate plans have been made by the Texas VHF-FM Society for TIRS whose primary purpose is to link all major cities in Texas during times of emergencies. de Dean W5BGE.

-...- -...-

S P L A T T E R :Some 100 VHFers from the areas of New Braunfels, SA, San Marcos and Seguin converged on the home of Marvin W5FFG and Susie WA5UFL at Seguin Saturday, June 29. Barbecue and all the trimmings, plenty to drink, swimming, dancing and ragchewing were the order of the day. A highlight of the shindig was the announcement that Marvin's repeater now is licensed as WR5ABB. Reports from those who attended were that all had a good time and rumors are floating around that this might become an annual affair.....FINALLY- Lee K5HZR now is officially back on the air at Marion, Texas.....Beck WA5RST is taking Cobalt treatments at Baptist Memorial Hospital - Room 470-C.....Are we losing one of our Sargents-at-Arms, or will we be gaining one, for a total of THREE? i.e. Brenda Trappe will marry Gene Mueller August 3, 7 p.m., Shepherd King Lutheran Church.....The Coastal Bend AR Digest (Corpus Christi) reports Horace Morgan, W5INN, said that as of 21 June 1973, the Lions Club aided by participating radio amateurs thruout the U.S. have distributed 6,525 eyes.de W5BGE.

-...- -...-

FOR SALE: Hw12, 75M xceiver, works good, $50 - Dean W5BGE.
DAFFYNITION - Dummy Loan - A Fake Drunk.(de W5LFM.)

CLAY COMMENTS

AUDIO POWERED TRANSISTORIZED NOISE CLIPPER

By CLAY W5ZPV

Noise reduction in amateur radio receiving circuits have been the subject of much investigation by individual hams and commercial equipment manufacturers. Early attempts to suppress noise interference resulted in vacuum tube diode noise clippers in the audio stages. Later efforts used IF noise silencers or blankers which detected noise bursts and used this information to reduce the gain of succeeding IF amplifier stages. Almost every ham has read some technical article or advertisement which extols the virtues of a particular approach. Unfortunately, most of the good effective designs are complex and involve expensive modifications to your present rig. Only the latest (and expensive) ham transcievers are known to possess really effective noise clippers or blanket circuits.

Much of the noise which interfers with reception of amateur radio signals is caused by man-made electrical or mechanical devices. "Hiss" or continuous random noise is caused by commutator sparking in DC motors or similar DC or AC machinery. Also, continuous wave interference such as from short wave diathermy equipment and other periodic waveform signals fall into this category. Receiver front-end selectivity can eliminate or reduce this type of interference. The second type of interference, impulse of "machine-gun bursts", is more difficult to eliminate. This type of interference normally consists of separated periodic impulses of high amplitude. Also, atmospheric electrical disturbances produce impulse interference which is a random type signal.

One inexpensive way to reduce the impulse noise interference in your ham rig is to employ an audio powered transistorized noise clipper in the speaker output circuit. The basic approach design for this approach was jointly developed by Mr. Merle Converse, Southwest Research Institute, and Mr. Ray Welty, USAF, Kelly AFB, Texas. Mr. Welty points out that this circuit can easily be installed at the audio volume control point in your receiver. However, the author installed this circuit in the speaker output by using line to speaker matching transformers. The author also substituted Motorola HEP transistors which were more readily available than the JAN (militarized) transistors used in the original circuit.

The final circuit for the author's noise clipper is shown in Figure 1. Two transistors, powered by the audio power contained in the receiver output and rectified by 1N270 diodes, will short out positive and negative peaks of the audio signal. The clipped level will depend on the setting of the potentiometer connected to the base of the transistors. Once a satisfactory clipping level is obtained, very little readjustment of the potentiometer will be required. The author used small 500-to-4 ohm transistor output transformers for the impedance matching requirements. This is considerably less expensive than the conventional 600-to-8 ohm line matching transformers. Most discarded transistor radios provide an excellent source for these transformers. Figure 2 shows a rough layout for a printed circuit board if this approach is desired. However, point-to-point wiring is just as effective for one time construction.

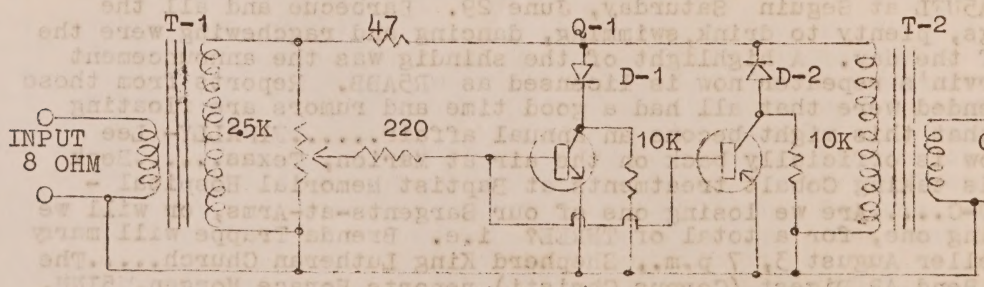
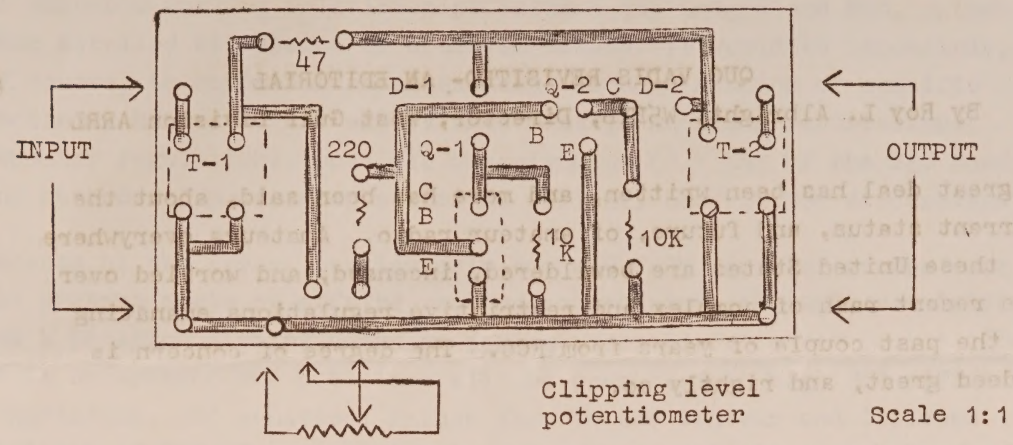


Figure 1

T-1, T-1 - 600-to-8 ohm transformers. (Note: 500-to-4 ohm transistor radio output transformers may be used.)
Q-1 - 2N2222 (Motorola HEP 54 may be used.)
Q-2 - 2N2907 (Motorola HEP 51 may be used.)

Figure 2 - Approximate layout for Printed Circuit Board for Transistor Noise Clipper



-..- -..- 73, Clay W5ZPV.

OFFICIAL BULLETIN NR 429 FROM ARRL HEADQUARTERS NEWINGTON CONN JUNE 7, 1973 TO ALL RADIO AMATEURS BT

CREATION OF A CLASS E CITIZENS RADIO SERVICE HAS BEEN PROPOSED BY THE FEDERAL COMMUNICATIONS COMMISSION IN A NOTICE ADOPTED JUNE 6. IT IS SUGGESTED THAT THE FREQUENCIES 224 TO 225 MHZ BE WITHDRAWN FROM THE AMATEUR SERVICE TO CREATE FORTY NEW CB CHANNELS. FCC SEEKS DETAILED COMMENTS ON WHAT ACTIVITIES SHOULD BE PERMITTED IN SUCH A SERVICE AND WHAT REGULATIONS SHOULD GOVERN, WITH PARTICULAR INTEREST IN ENFORCEMENT PROCEDURES. THIS RULE MAKING PROPOSAL ARISES FROM RM 1747, FILED TWO YEARS AGO BY THE ELECTRONICS INDUSTRIES ASSOCIATION, AND FIVE OTHER REQUESTS WHICH FCC FELT TO BE IN THE SAME BASIC AREA: RM 1633, 1656, 1761, 1793, AND 1841. AMATEURS AND CLUBS WILL UNDOUBTEDLY WISH TO FILE OFFICIAL COMMENTS DIRECTLY WITH FCC AFTER READING THE FULL TEXT OF THE PROPOSAL IN THE AUGUST ISSUE OF QST. THE DEADLINE FOR COMMENTS IS SEPTEMBER 20. HOWEVER, LEAGUE MEMBERS MAY WANT TO INFORM THEIR DIVISION DIRECTORS OF THEIR INITIAL REACTIONS, PRIOR TO THE ARRL BOARD MEETING JULY 19. NAMES AND ADDRESSES APPEAR ON PAGE 8 OF 1973 ISSUES OF QST. THE HEADQUARTERS SEEKS INFORMATION ON PRESENT AND PLANNED AMATEUR USE OF THE ENTIRE 220-225 MHZ BAND WITH AS MUCH STATISTICAL INFORMATION AS POSSIBLE. AR

THEFT? OR GIVEAWAY? By Jerry W5ABQ.

The Howl of Anguish and Indignation Shall Now Arise !! When Electronics Industries Association first proposed RM 1747, two years ago.....the matter was given ample publicity in QST...and in OBS transmissions...("EIA" represents those who sell stuff to CBer's, remember). Of course there will probably now come forward the usual "complainers"...saying that the league sat on it's hands and let this happen! Quite the contrary...BUT...amateur use of these frequencies has NOT been "the most"...comment to directors has been almost nil...until now! Our West Gulf Director Roy Albright W5EYB is to leave soon for the July 19 board meeting of ARRL! TELL him what you think so he will have this information to take with him.

Perhaps YOU don't use VHF, at all, or those frequencies in question, You may even need to do so. WILL THOSE FREQUENCIES BE "AMATEUR"THEN? The usual LETHARGY in expressing our desires could be a contributing factor in amateur loss, eventually, of a whole segment!

COMMENT TO THE FEDERAL COMMUNICATIONS COMMISSION: Comments (on the above, on or before Sept. 20) to FCC should be sent to the Federal Communications Commission, Washington, D. C. 20000. Attention Amateur and Citizens Licensing Division. If possible send 14 copies. (not at all difficult now that most places have Xerox or other instant print service...cost about 8¢ to 10¢ per copy. AND WELL WORTH IT! In such comments: State whatever VALID reasons you may have, or be able to think up, as to why you are for or against an issue, or Docket before the commission. This also applies to any proposal you ever wish to make to the FCC. (Double spaced typing please).... If you wish to GIVE AWAY frequencies...or perhaps whole segments,let indifference, and lethargy, REIGN SUPREME. (and then shut-up!) At least...let's TRY..... 73, Jerry Morgan W5ABQ.

Ed. Note: Above article appeared in TEX CW Bulletin, July issue.

QUO VADIS REVISITED- AN EDITORIAL

By Roy L. Albright, W5EYB, Director, West Gulf Division ARRL

A great deal has been written, and more has been said, about the current status, and future, of amateur radio. Amateurs everywhere in these United States are bewildered, incensed, and worried over the recent rash of complex and restrictive regulations emanating in the past couple of years from FCC. The degree of concern is indeed great, and rightly so.

Unfortunately, the discussions among amateurs, by a spokesman for the Commission, by certain amateur radio publications, and indeed by members of the ARRL official family have generated emotional and irrational outbursts which have seriously clouded the issues and perhaps have impeded possibility of early solution to the problems.

The official position of the ARRL, as outlined by the board of directors at its January meeting, perhaps belatedly, is that the time for action is at hand. In recognition of the growing problems the board directed its president, and general manager, to initiate early and continuing action to seek means for a viable solution to current problems and to establish an operating liaison with the Commission which would afford amateurs a channel of communication with FCC, through the League, so that future proposals for change of amateur regulations would be subject to a broader base of thinking, prior to publication, than is possible within the limitations of the Commissions offices and resources, and hence provide the Commission with the reservoir of knowledge and experience which should aid materially in the preparation of governing regulations. It should be obvious such a channel should be of considerable benefit to the Commission since it would provide that body with a public forum for discussion of issues too complex for resolution at the Washington level.

For the past six months League President Dannals and General Manager Huntoon have been working diligently to accomplish the mission directed by the board. Considerable progress has been effected. For instance, on 9 July the League has been granted the privilege of making an overall presentation concerning the state of amateur affairs before the full Commission. One can recall no previous instance where we have had the ear of the entire Commission in eyeball-to-eyeball conference.

(cont'd)

Primarily, this meeting will relate to philosophy, and to development of amicable working relationships between the League and FCC, rather than detailed discussion of specific issues. It would be impossible, of course, to conduct such an exchange without mention of specific problems. Hence, we can expect that message handling restrictions, Repeater regulations, possible reassignment of 1 Mhz of the 220 band and methods of processing petitions will all come in for discussion.

Because of the furor, particularly among VHF-FM Repeater groups over the present state of affairs, one radio magazine (NOT QST) has initiated a petition signing campaign asking reconsideration of Docket 18803. It is understood the petitions will be presented to high FCC officials, congressmen, and senators, rather than to the Amateur and Citizens division of FCC. Current FCC rules place a time limit on submission of requests for reconsideration. This time has long gone by, hence this unique procedure. If this petition is to have effect it would come through pressure from those addressees.

In order to provide relief from the intolerable Repeater situation it is believed our best course of action would be the preparation of a new petition, requesting specific changes, addressed to the prescribed office, in the prescribed manner. Some time ago each member of the ARRL VHF-FM Advisory Committee was requested to submit his recommended changes. This has been done, the documents are now being studied, and it is hoped we can have some meaningful proposals ready for presentation to the ARRL board of directors at our July meeting.

The 220 Mhz problem is a real fiasco. It appears the EIA originated the proposal to give more space to CB'ers under the impression they (the manufacturing industry) would reap a huge financial bonanza. Perhaps so- but their efforts to compete with Japanese imports on 2-meter rigs have been a dismal failure. Why would it be any different on 220? If the Amateur and Citizens Licensing division of FCC believe they can more effectively regulate CB operation on 220 than on 27 Mhz they are more naive than one would expect. As Gertrude Stein would have said: "A bootlegger is a bootlegger is a bootlegger." The situation poses a real hazard for amateurs. 146-148 is jammed to the hilt in some areas. We are now necessarily spilling over into 220. How will the FCC propose to keep illegal CB'ers out of our 220 Mhz Repeaters? Do they expect us to do it? If so, our Repeater licenses had better come equipped with the power of forcible entry and arrest. Finally, has anyone asked CB'ers if they want to be moved to 220? I'd like to ask Texas Jackrabbit and California Quail and Alabama Red Fox how they will enjoy communicating without their 2KW linears and favorable 27Mhz skip. One favorable factor - if FCC moves CB'ers to 220 we amateurs will be able to obtain some good linear amplifiers at bargain prices.

It is indeed regrettable the prolific writers of amateur regulations in Foggy Bottom neighborhood lacked the fortitude to summarily dismiss the EIA proposal, as they have done amateur petitions. It is beginning to appear those who advocate an amateur lobby may have a point.

It is disturbing to hear remarks that "Prose Walker is intent on closing down repeaters," that "Amateur radio is dying," and "1973 is amateur radio's last year."

Most certainly vultures are sitting in the tree tops watching for signs of weakness in the amateur body. Thomas Paine once wrote - "These are times that try men's souls."

But - Amateur radio is NOT dying. 1973 is NOT amateur radio's last year. And, although we have some very strong differences with Prose Walker over the wording of some recent regulations it is unfair in the extreme to believe a dedicated amateur of his caliber is so small as to intentionally stifle amateur operation in any of its facets.

True, with present regulatory trends our future is in jeopardy. We need to close ranks behind the only recognizable organization in a position to defend our interests - the ARRL. If ARRL fails in its program to rectify our overly restrictive regulations and if we fail to give it our support by membership and constructive criticism then indeed the vultures will move in, not just on 220, but on all our frequencies.

73,

Roy Whitney

W5EYB

San Antonio Radio Club
Box 62
San Antonio, Texas
78291

George Munsch W5VPQ
Ella Munsch W5TSE
11314 Janet Lee
San Antonio Tx 78230